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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,495	05/30/2000	Alan Frank Graves	71493-750	8315

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EXAMINER	
TRAN, DZUNG D	
ART UNIT	**PAPER NUMBER**
2638	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/580,495	GRAVES ET AL.	
	Examiner	Art Unit	
	Dzung D. Tran	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) *4-14,17,18 and 25-57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 15, 16, 19-24 and 58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 15, 16, 19-22 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. U.S. patent no. 6,559,984 in view of Terahara et al. U.S. patent no. 6,134,034.

Regarding claims 1, 15, 16, 19-22 and 58, Lee clearly discloses in figure 5, a optical path monitoring with an optical switch (520) providing individual signal paths between a plurality of input ports and a plurality of output ports, said switch having a plurality of wavelength division multiplexers 540 for combining sets of individual switched optical signals into multiplexed switched optical signals (see figure 5), the system comprising:

a plurality of optical couplers (same as splitters) figure 5C, element 536;

a plurality of optical variable attenuator 535 (same as VOIC) for insertion into respective ones of the individual signal paths and for individually controlling the intensity

of optical signals present in said respective ones of the individual signal paths in accordance with respective intensity control signals; and

the feedback controller 538 (same as claimed equalizer) connected to the splitters 536 and to the optical variable attenuator 535, for producing an estimate of the optical power of each individual switched optical signal and generating the intensity control signals as a function of the estimates of optical power (col. 5, lines 37-51). Lee differs from claims 1, 15, 16, 20-22 and 58 of the present invention in that Lee does not specifically discloses the optical variable attenuator is controlled by a controller that connected to an output of a wavelength division multiplexer and to the optical variable attenuator (same as VOIC). Terahara in figure 13, discloses an optical power detector/controller 36 connected to an output of a wavelength division multiplexer 18 through splitter 32 and to the optical variable attenuator (58-1, 58-2, ...58-m) (same as VOIC) for equalizing the power of each of plurality of wavelength (e.g., ch-1, ch-2, ..., ch-m). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to include the teaching of Terahara in the system of Lee. One of ordinary skill in the art would have been motivated to do this in order to adjust the power level of each optical channel based upon the detected power level of each plurality of attenuated optical signal so as to equalize the power in each of the plurality of optical channel.

3. Claims 2, 3, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. U.S. patent no. 6,559,984 in view of Terahara et al. U.S. patent no. 6,134,034 and further in view of Taylor et al. U.S. patent no. 6,049,413.

Regarding claims 2 and 23, Lee and Terahara do not discloses the equalizer comprises: for each of the optical splitters, a wavelength demultiplexer connected to an output of said splitter, for each wavelength demultiplexer, a plurality of optical receivers connected to said demultiplexer, for each optical receivers, a power estimator connected thereto and a common controller connected to each power estimator; said controller being adapted to read a power estimate from each power estimator and to generate said intensity control signals as a function thereof. Taylor in figure 12, discloses an optical system that include a circuit for power mornitoring comprises: a wavelength demultiplexer (1208), for each wavelength demultiplexer, a plurality of optical receivers (1210-1 to 1210-n) connected to said demultiplexer; for each optical receivers, a power estimator (1212-1 to 1212-n) connected thereto and a common controller (1214) connected to each power estimator for controlling the intensity (for example, by controlling the amplifier1206-1 to 1206-n). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to include the teaching of Taylor in the system of Lee and Terahara. One of ordinary skill in the art would have been motivated to do this since power monitoring is well known in the art for adjusting or controlling the signal intensity so that the received powers are substantially equal.

Regarding claims 3 and 24, Taylor further discloses the receivers 1006 coupled to filter 1104 for outputting a narrower bandwidth.

Response to Arguments

4. Applicant's arguments filed on 08/31/2005 have been fully considered but they are not persuasive.

A) Rejection of claims 1, 15, 16, 19-22 and 58 under *USC § 103 over Lee et al. U.S. patent no. 6,559,984 in view of Terahara et al. U.S. patent no. 6,134,034*

Applicant argues that Lee reference does not teach claim 1 limitation "a plurality of splitters each being connectable to an output of a respective one of the wavelength division multiplexers". However, the missing limitations applicant argues that Lee reference does not teach is in Terahara reference. For example, Terahara in figure 13, discloses an optical power detector/controller 36 connected to an output of a wavelength division multiplexer 18 through splitter 32 and to the optical variable attenuator (58-1, 58-2, ...58-m) (same as VOIC) for equalizing the power of each of plurality of wavelength (e.g., ch-1, ch-2, ..., ch-m). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant's further argues that there is no motivation in the prior art and the examiner's conclusion of obviousness is based upon

improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

B) Rejection of claims 2, 3, 23 and 24 under *USC § 103 over Lee et al. U.S. patent no. 6,559,984 in view of Terahara et al. U.S. patent no. 6,134,034*

Applicant's argues that there is no motivation in the prior art and the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Furthermore, Terahara clearly shown the different limitations of Lee with the claimed invention that is an optical power detector/controller 36 connected to an output of a wavelength division multiplexer 18 through splitter 32 and to the optical variable attenuator (58-1, 58-2, ...58-m) (same as VOIC) for equalizing the power of each of plurality of wavelength (e.g., ch-1, ch-2, ..., ch-m).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vanderpuye Kenneth can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran

11/06/2005

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER